

Flight

First Aero Weekly in the World.

A Journal devoted to the Interests, Practice, and Progress of Aerial Locomotion and Transport.

OFFICIAL ORGAN OF THE AERO CLUB OF THE UNITED KINGDOM.

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THE POLICY OF JOINING HANDS.

NOTHING can be more gratifying than the growth of the flying movement. As one looks back in an endeavour to review progress during the brief period of its practical accomplishment—a period so brief that one admits it to be too close at hand for one to be able to take the standpoint of the historian—it seems that it was all a question of breaking the ice. Once the Wrights began to fly in public, and Farman had won his closed kilometre prize, all manner of folk took to the air. Yet we had to wait more than a year before the first flying-machine race meeting could be organised. Scarcely had it taken place at Rheims than the success of a number of subsequent ones was assured, so that the Brescia meeting followed with scarcely an interval, and, at the time of its being held, a number of the leading exponents were giving demonstrations in dynamic flight in different parts of the Continent, including Norway; while next month we are to have an important aerial race meeting at the Juvisy aerodrome near Paris. The Blackpool meeting also looks like materialising, and, in regard to next year's programme, it is quite plain that we shall have an almost continuous series of important aerial race meetings as well in this country as on the Continent. So, too, with the exhibition question. It needed a deal of effort and courage to embark on the first serious shows in Paris and in London, but scarcely had they been held than they were regarded merely as the first of a very long unbroken series, and the passing of every month has made it more and more assured that such anticipations will be fulfilled.

While all these developments have been taking place, and while the major aeronautical bodies have been wisely determining their respective spheres of activity, there have been inaugurated all about this country a series of aeronautical societies, as it were implicitly giving the lie to the contention that we in Britain are very indifferent to this matter. The story of the inaugural meetings of most of these local bodies reveals that it has been a mere question of setting a spark to the tinder. It was because no one had taken any practical steps in organising those interested in the movement that none had a very accurate notion of how many there were who followed the development of human flight with keen and intelligent interest. The success that has attended all those local bodies that have come into being lately should encourage other enthusiasts in other centres to take the preliminary steps also, for in no case where the endeavour has been legitimately and properly conducted has there been any dearth of recruits.

In the main the majority of these newly created and much-to-be-encouraged bodies have been established with the aim of bringing together those who are interested rather in the practical than in the theoretical phases of flight, the members desiring to become owners of flyers as soon as practicable, and to enter into friendly rivalry

one with another from time to time in competitions that may be held locally. These things being so, it is greatly to be desired—we are writing quite unofficially so far as the Aero Club is concerned—that in the mutual interests of the local bodies as well of the national movement, some sort of affiliation or association should be entered into as between them and the Aero Club of the United Kingdom, which stands for the sporting, practical and social phases of the movement, and is already recognised throughout the civilised world abroad as representing the Federation Internationale Aéronautique in these islands. By means of such association, members of the allied bodies would be enabled to play their proper part in safeguarding the best interests of national and international competition, apart from which they would exert that due influence which is their right upon that central organisation whose duty it will ever be to formulate their views and policies as concerning those matters which have more than a purely local application. Of course, in regard to all purely local matters—that is to say, matters which are the concern of the local club or association, and do not in anywise affect aeronautics outside that district—each local body would be self-governing, while by the terms of such affiliations as are desirable they would secure direct representation in the councils of the central authority. This way dissipation of effort may be saved, and all the many benefits of unification may be achieved.

Most of those who are taking a leading part in flight have been similarly interested in pioneering other movements for the benefit of the community. Hence it behoves them to benefit by experience in the past. They will be able to appreciate the folly of presuming that flight is a movement that will not encounter serious opposition as soon as it begins to be proven to the general public that it is something that is going to work a lasting change on the conditions of life. There are those who are quite content at the moment to be passive because they imagine flying men to be amusing sorts of lunatics who do acrobatic things in the air; whereas, as soon as they can appreciate that these progressive people are perfectly normal and rational folk without any acrobatic gifts whatever, and as soon as they see persons of their acquaintance taking to flying, they will begin to grasp that the development is something seriously to be considered. And for the type of mind of many any serious change is a thing to be opposed tooth and nail. And, when prejudice enters into the case against anything, it is extraordinary how easily and how quickly those whose interests are affected can evolve objections against it.

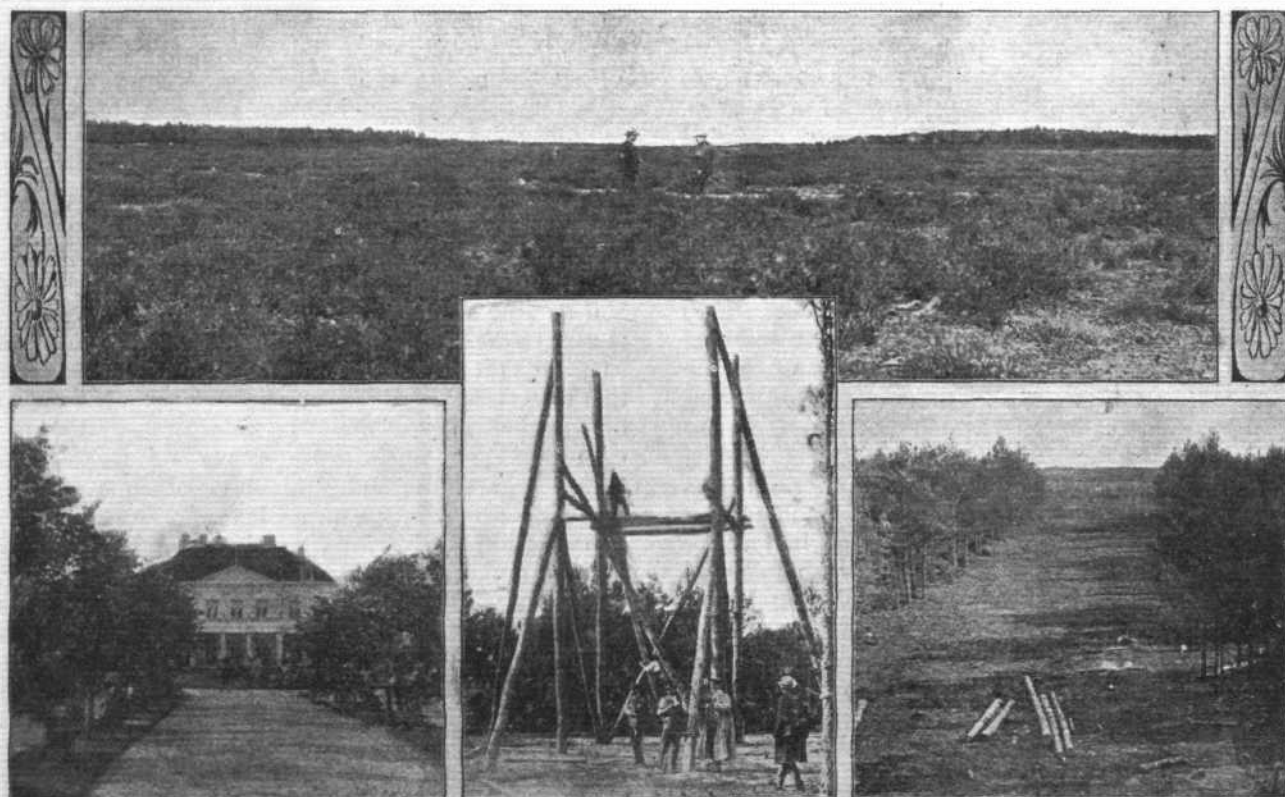
For these and many other reasons it is assured that the kindness or the indifference with which aviation is regarded by the public at the moment will be supplemented by a third attitude equally active with the first-named, the attitude of opposition. Now, a local body

of 50, or 100 or 200 enthusiasts concerning flight does not enjoy very great prospects of exercising influence in opposing any forces that may be brought against the movement, which, in its early days especially, is in the greatest need of being organised and unified. Supposing difficulties to be created in Glasgow, in Liverpool, in Birmingham, in Portsmouth, in Sheffield or elsewhere, the local flying societies of those districts could never hope to be regarded any time during the next few years as any more than negligible quantities by comparison with the forces that could be ranged against them. But, suppose a proper scheme of association were in full operation, so that in its fight the local body would have the whole of those interested in the flying movement in Britain behind it, as well as actively engaged in assisting it, and the complexion of affairs would be very different indeed. This linking-up of forces, or mutual co-operation, is a scheme for the multiplication of influence, for the defeating of dissipation of effort, for, as it were, the mutual insurance of the movement.

The history of every other movement, and future developments that any business man can see to be inevitable, leave room for no manner of doubt but that within the next few years all locally established aeronautical bodies will have to organise themselves in some system of mutual co-operation. Therefore, it is an idle thing to delay the vital work of self-organisation, because the great thing is to assist initial progress of the movement and to have things settled smoothly and amicably, to the end of preventing friction and regrettable wastage of effort as by the growing up of vested interests. In flight we want no vested interests. We want one grand movement organised on such a scale that all its branches shall be adequately represented, and so that at any and all times it will be possible to bring a united force to bear towards the promotion of aviation in Britain. For this reason we suggest that provincial organisations should,

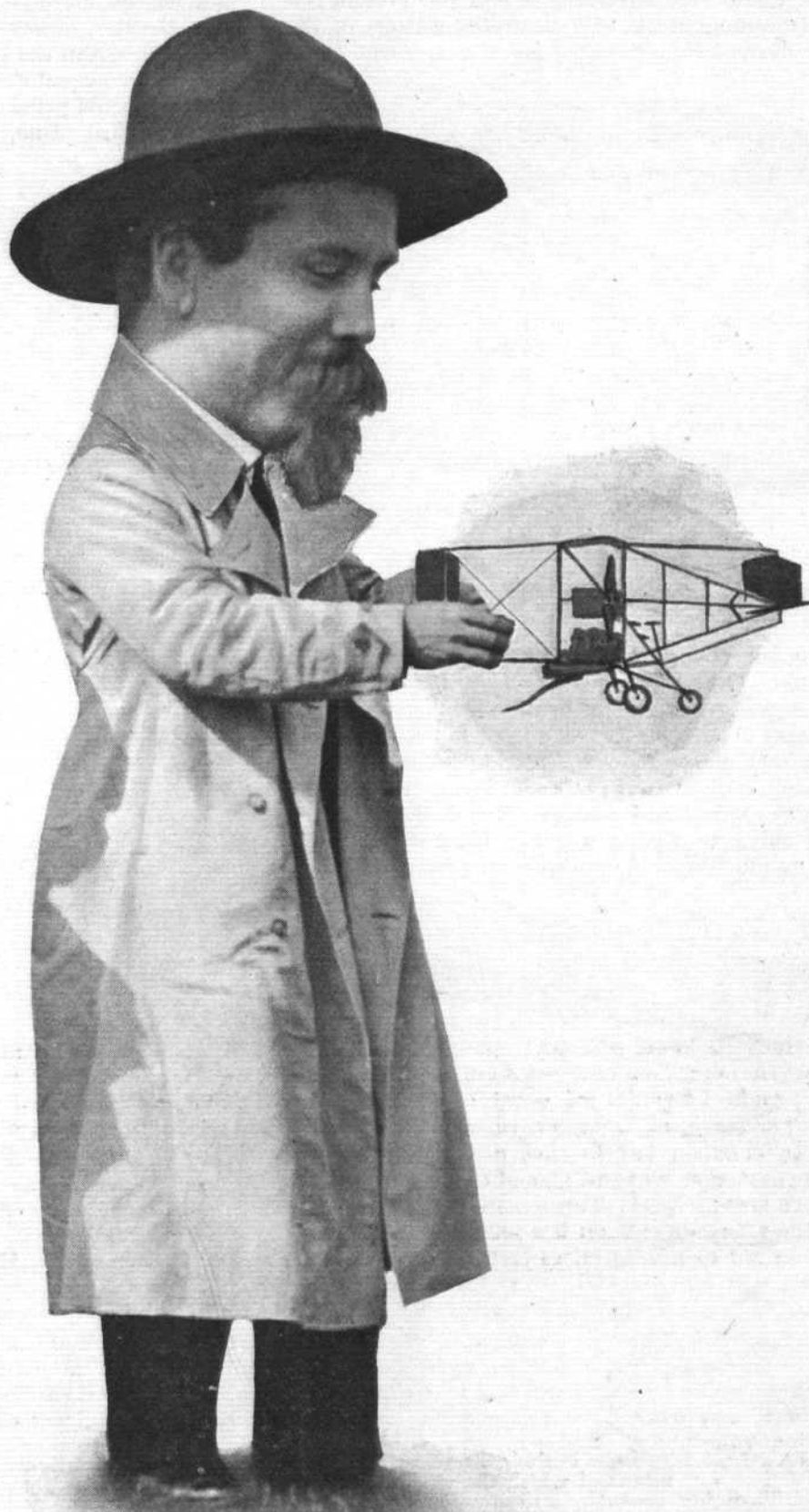
each according to its kind, ally themselves with that central body which is concerned with the same work that itself has undertaken. Those concerned with the sporting, the social and the practical phases of the movement should become affiliated with the Aero Club of the United Kingdom; those of purely scientific interest should link themselves up in some fashion with the Aeronautical Society of Great Britain. And the work of the Aerial League of the British Empire is such that already it has established itself in sundry centres for the more efficient carrying out of the great business of patriotic propaganda; while, as regards the kite-flying clubs and those instituted for the flying of models and so forth, possibly some scheme of affiliation might be arranged with the Aero Club League, through which inter-club competitions could speedily be arranged for, thereby spreading the movement in its very elementary phases. In any case, the main thing is for the local bodies to get linked each to its kind without more ado, and we trust that the means of doing so will prove easy and agreeable, for we cannot see any valid reason why there should be difficulties in the way of uniting the forces of aviation in Britain, not in the interests of any one group of individuals, but in the interests of all, because in the interests of the cause.

Attempts are bound to be made from time to time by those whose personal interests are antagonistic, to sow discord in the camp and to do all in their power to weaken the unity of representation. Let every *bona fide* well-wisher of the movement remember, however, that national institutions like the Aero Club are precisely what their members cause them to be, and that by no stretch of the imagination can such a body be imbued with personal attributes of an autocratic kind, inasmuch as the membership is virtually open to all, and the official *personnel*, as well as the constitution of the committees of management, are solely in the hands of the entire membership.



Views showing the new "Mars" flying grounds in Germany at Bahnhof Bork. In these is seen the mansion "Mars" from which the grounds take their name, a general view of the flying field, a stretch of cleared forest for the starting point, and in the centre the "jumping off" platform in course of erection. Our pictures are from the "Automobil-Welt." This flying ground is about 44 kiloms. from Charlottenburg on the Berlin-Belzig-Sangerhausen line.

FLIGHT PIONEERS.

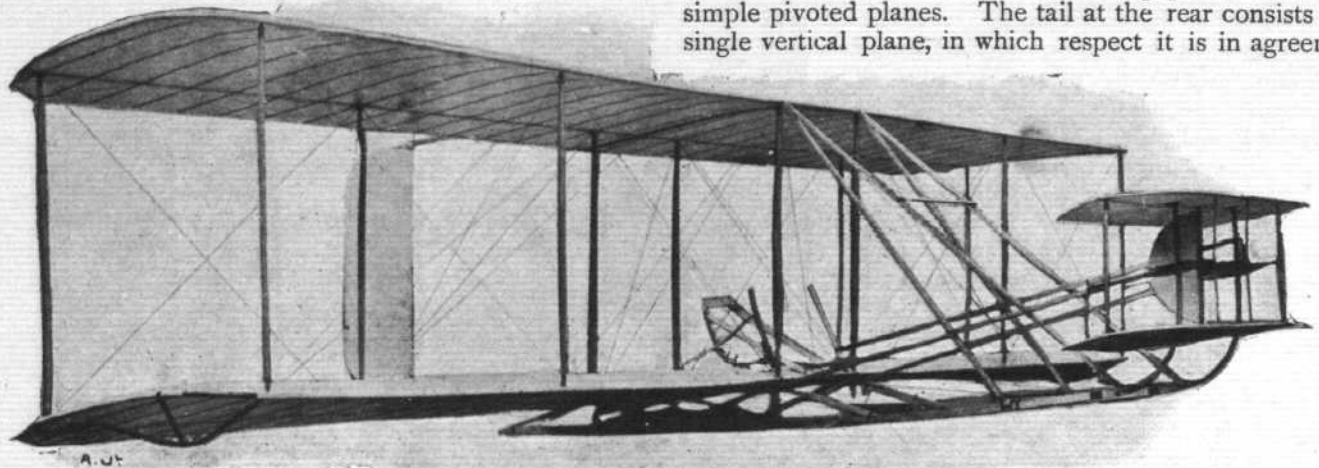


MR. S. F. CODY.

THE WRIGHT GLIDER AS MADE BY CLARKE.

GLIDING is a side of flight that is a little apt to be neglected in the present rush to achieve the higher art; but it is a useful side nevertheless, and the present is a particularly appropriate time to learn the mastery of the motorless flyer, seeing there is for the moment some

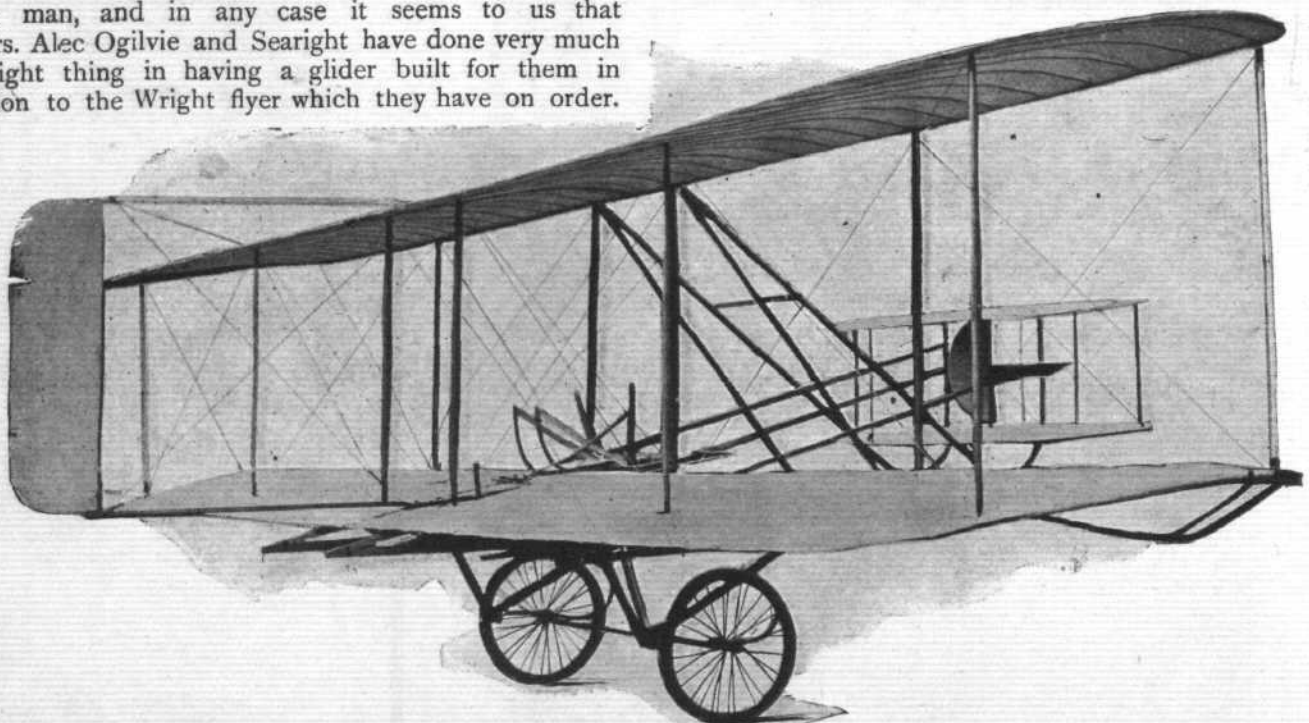
work has been admirably executed by Messrs. T. W. K. Clarke and Co., of Kingston. It is of course a biplane, and has an elevator in front with a vertical tail behind. The elevator, however, is constructed according to the design shown in the latest Wright patent—with which our readers are acquainted—having flexing planes instead of simple pivoted planes. The tail at the rear consists of a single vertical plane, in which respect it is in agreement



General view, from in front, of the complete Wright-Clarke glider. Light bow-skids are fitted under the extremities of the lower deck, as shown above.

difficulty about obtaining a proper supply of engines in this country. Other experimenters have, it is true, shown that the stepping-stone used by the Brothers Wright is not necessary in all cases; but, all the same, we are not at all sure that gliding may not teach a lot even to the flying man, and in any case it seems to us that Messrs. Alec Ogilvie and Searight have done very much the right thing in having a glider built for them in addition to the Wright flyer which they have on order.

with the Wright glider, but differs from the Wright flyer, which has a double rudder. On the other hand the main decks are double surfaced on the machine which Messrs. Clarke have constructed, whereas the gliders used by the Wright Brothers were, we believe, invariably only

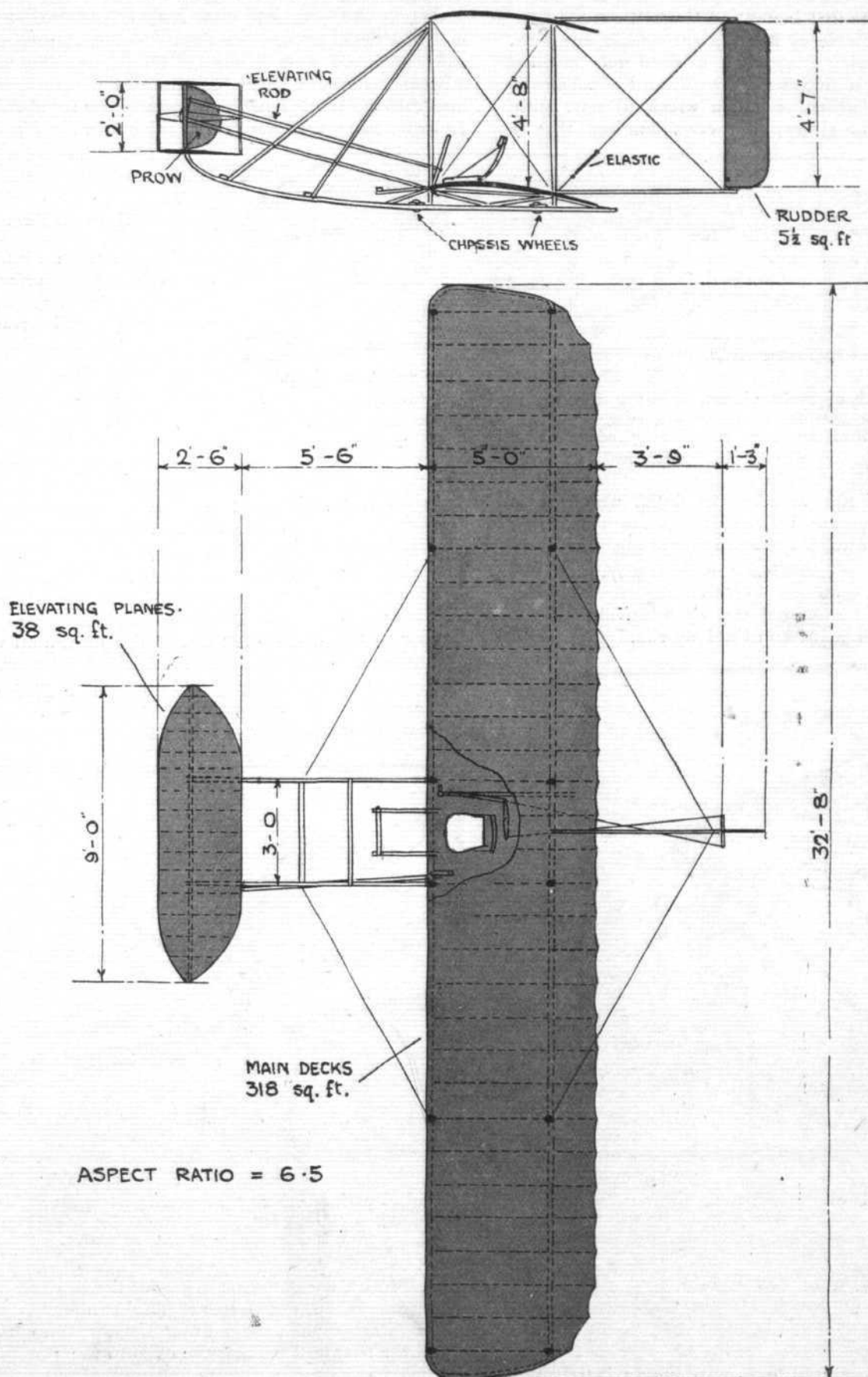


In this view, as seen from behind, the glider is shown mounted on a specially-designed two-wheeled hand-cart, by means of which the whole machine can be easily wheeled about by one man.

At the least it may be the means of saving the flyer from some little unnecessary damage during the early stages of learning to fly.

The glider which Messrs. Ogilvie and Searight have had built for them is to all intents and purposes a copy of the machine used by the Wrights in 1902, and the

single surfaced. The workmanship which Messrs. Clarke have put into the construction of the glider is admirable, and thoroughly upholds British reputation for making a sound job. There are some people who rather incline to the view that a machine which is going to be knocked about need not have much time spent upon its construc-



Plan and Elevation to Scale of the Wright Glider as made by Clarke.

tion in the first instance, but for our own part we favour the other aspect of the case for the two points which it has in its favour, the first being that the better a machine is made the less liable is it to give trouble any way, and the second being that when it does get smashed a well-made article is always more easily and satisfactorily repaired than one which is half a wreck to start with. Moreover, there is always the consideration that a

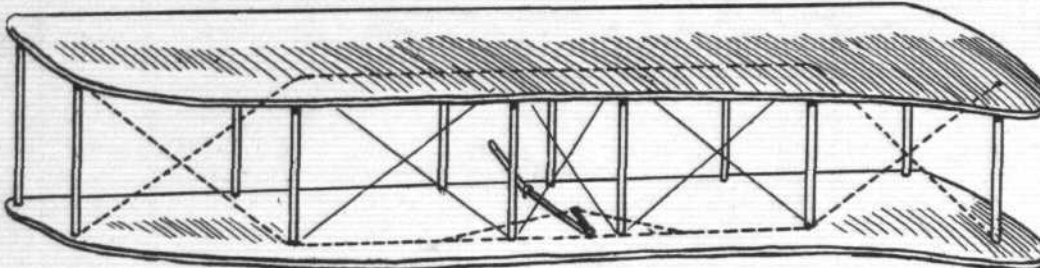
supply; it has a weight of 36 sq. ft. to the lb., and the waterproofing is done by a celluloid treatment. The seams in the complete covering are diagonal, and each half of a deck, from an extremity to the centre, is practically enclosed with a kind of fabric bag, the edges of adjacent bags are laced together in the centre, while at intervals the fabric is tacked down to the supporting ribs. In order to prevent the fabric being torn, a thin strip of

wood is placed between the fabric and the heads of the nails.

Main Decks.

The skeleton framework on which the surfaces are stretched consists, for each deck, of a pair of transverse spruce spars having a section 1 in. deep by $1\frac{1}{2}$ ins. At the extremities these spruce spars are joined together by a piece of bent elm, a scarf joint being made between the two timbers.

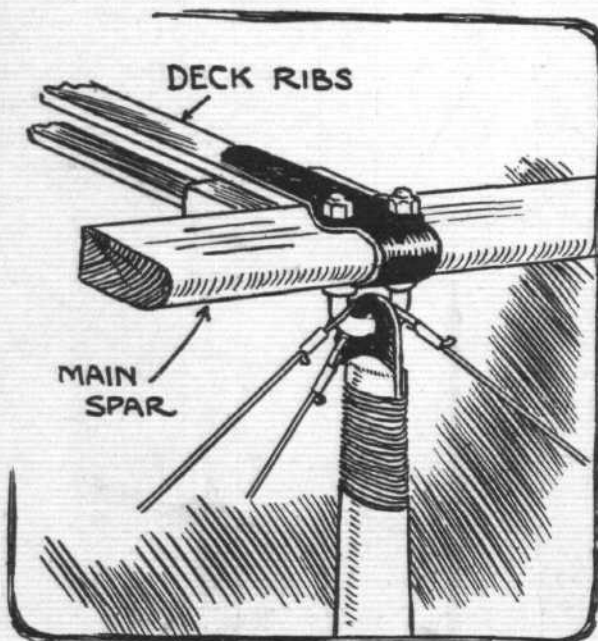
At intervals of 1 ft., light ribs pass fore and aft between the spars and overlap the rear spar to give a flexible trailing edge extending rearwards about 15 ins. The ribs consist of two small strips of rectangular section wood separated by distance pieces at intervals. Each rib as it is built up is curved to a template so as to give a camber to the decks of 3 ins. at the maximum versine. The method of fastening the ribs to the front spar, which by the way is rounded off to form a blunt cutting edge, is to secure the last distance piece to the spar by screws so that it virtually belongs to that member and, as it



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Diagrammatic sketch of main planes, showing the arrangement of warping-wires (in dotted line), and the manner in which the rear edges of the planes are flexed. It is important to note that the front or entering edges are unaffected by this movement, remaining always perfectly straight.

certain amount of risk attaches to flight, which it is gratuitous to exaggerate by neglecting any reasonable proportions such as using a decently built machine to fly on, and although, of course, a well-made glider will probably cost more than one on which less care has been spent, there is no reason why the old adage should not apply, "the best is cheapest in the long run."

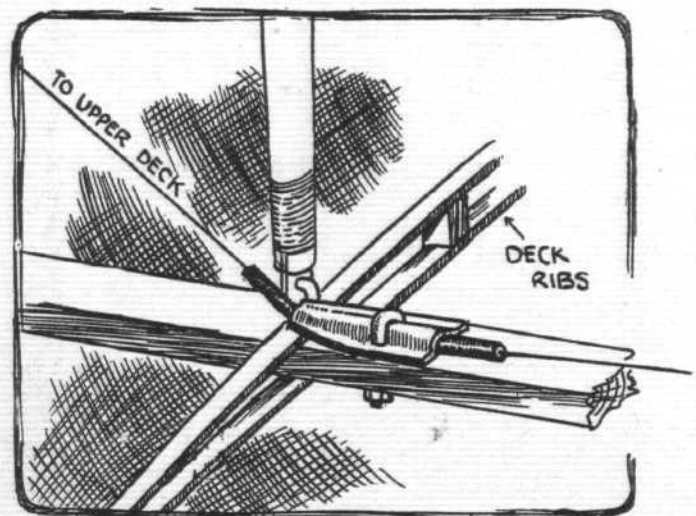


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Sketch of the flexible-joint connecting the vertical struts to the main decks. A slight notch is made at the lower end of the U bolt to keep the eye of the strut central.

Timber and Fabric.

The material from which Messrs. Clarke have constructed the glider is for the most part silver spruce, a timber which, we understand, they are able to procure in 20 ft. lengths without a flaw. In one or two places where bent woodwork is required—as, for instance, the extension of the runners which carry the elevator, and the extremities of the main decks—American elm is used. The decks are double-surfaced with a special fabric of British make, which Messrs. T. W. K. Clarke



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Instead of pulleys where the warping-wires leave the decks, short lengths of Bowden wire sheath are used clamped to the rear spars, as shown above.

were, forms a supporting tongue for the top and bottom members of the rib proper. The connection is then further strengthened by putting a light strap of metal round the spar and tacking the ends to the rib.

Considered as a unit, the framework of the two decks, taken together, forms an example of the usual lattice girder work which has been commonly adopted on biplanes. In accordance with the Wright system, the machine built by Messrs. Clarke further belongs to the flexible type, that is to say, non-rigid joints are employed

as fastenings between the main spars and the struts which separate them.

These joints are carried out somewhat after the manner devised by the Wrights, but Mr. Clarke has substituted a steel plate for the wire eye used in the Wright machine. The struts have a saw-cut taken down their extremities for an inch or so, and into this is let the

steel plate which is pegged and bound in place. The projecting end of the steel is drilled to receive a hook, which in this case consists of a steel U-bolt which passes through the main spar and is secured on both sides by nuts. The same steel plate also provides an anchorage for the wire ties.

(To be concluded.)



THE BRESCIA MEETING.

IN view of the few aviators who had decided to take part in the Brescia meeting, it was perhaps hardly to be wondered at that the results were very meagre after what had been accomplished at Rheims. Bleriot was, of course, handicapped by his various injuries, and did not succeed in making any striking performances, so that Curtiss and Rougier shared the honours, the former securing first place in the distance contest and second in the height competition, while the alternative positions were filled by the former racing car driver.

The International contests were concluded on Sunday, but one day, Friday, during the previous week was a blank day, as the high winds prevented any flying. On Thursday, the 9th inst., Rougier opened the proceedings at 4 o'clock with an initial flight of three kiloms. preparatory to trying for the Grand Prix, in which a distance of 50 kiloms. had to be covered. He found, however, that his motor was not running well, so abandoned his attempt. Later he came out again and flew to a height of about 100 metres. During the afternoon Anzani, on his Voisin, made four attempts to fly, but could not get off the ground, while Bleriot, Leblanc and Curtiss each made short trials, the last-mentioned trying for the starting prize, in which the flyer had to rise before 30 metres had been covered.

Friday, as we have said, did not produce any flying, but on Saturday Curtiss made up for this more or less by covering 50 kiloms. in 49 mins. 24 secs., while

Rougier surprised everyone by rising steadily to a height of 115 metres, and these two performances not being beaten they respectively secured the Grand Prize of Brescia and the Altitude Prize. Leblanc and Bleriot both brought out their machines, but could not keep going.

On Sunday Curtiss made an attempt for the Altitude Prize, but only reached a height of 90 metres, while Rougier, in an attempt for the Grand Prix, covered the 50 kiloms. in 69 mins. 42 secs., while he covered six laps in 82 mins. 12 secs. Both these two performances secured for the respective owners second prizes in each event. Lieut. Calderara won the passenger prize by carrying Lieut. Savoia over ten kiloms. In the evening Signor d'Annunzio succeeded in inducing Curtiss to take him for a flight, but the combination proved too heavy for anything but a short trip. Later, Lieut. Calderara complied with Signor d'Annunzio's wish, and carried him for more than a mile. The Italian poet was almost delirious with enthusiasm, and some poetical ode to flight may be looked forward to, he having determined to give his impressions in verse.

On Wednesday, Comte de la Vaulx made an ascent in his dirigible "Zodiac," taking Princess Lætitia Bonaparte as a passenger, and Lieut. Calderara carried Lieut. Savoia on his Wright flyer for 9 kiloms. Rougier is staying on at Brescia with the object of beating the height record.



AT BRESCIA AVIATION MEETING.—A popular flyer—M. Anzani starting on his Voisin biplane. Note the trail of exhaust from the motor.

AERO CLUB OF THE UNITED KINGDOM.

OFFICIAL NOTICES TO MEMBERS.

Fixtures for 1909.

September 5-20 ... Brescia Aviation Meeting.
September 25 ... International Aeronautical Exhibition, Paris.
October 3 ... Gordon-Bennett Balloon Race, Zurich.

Committee Meeting.

A meeting of the Committee was held on Tuesday, September 14th, 1909, when there were present: Mr. Roger W. Wallace, K.C., in the chair, Mr. Ernest C. Bucknall, Mr. Martin Dale, Mr. John Dunville, Prof. A. K. Huntington, Mr. F. K. McClean, Mr. C. F. Pollock, Mr. J. Lyons Sampson, Mr. Stanley Spooner, Harold E. Perrin, Secretary.

New Members.—The following new Members were elected:—

Lieut.-Col. A. Y. Barton.	E. H. Lancaster.
Alderman John Bickerstaffe.	Hubert Latham.
Trevor Ilyd Bowen.	H. L. Mather.
Col. Campbell.	Albert Lindsay Parkinson.
P. Harrington Edwards.	Capt. R. O'B. Taylor.
F. Shaw Kennedy.	G. Herbert Woods.

Provincial Aero Clubs.

The question of arrangement under which properly constituted Clubs in the Provinces can be associated with the Aero Club of the United Kingdom, was again fully discussed by the Committee. The Aero Club is now prepared to consider application from any such bodies.

Bleriot and Latham Match.

The Secretary of the Aero Club accompanied MM. Bleriot and Latham to Wembley Park to inspect the grounds in view of the proposed flying match.

Some weeks ago the Aero Club communicated with MM. Bleriot and Latham that, in their opinion, Wembley Park was not suitable for a match of this kind, and this opinion was confirmed by the aviators themselves. The match will therefore not take place.

Gordon-Bennett Balloon Race.

The Gordon-Bennett Balloon Race will take place at Zurich on October 3rd next. The Aero Club will be represented by Mr. F. K. McClean, who will have as aid Mr. A. Mortimer Singer. The new balloon, the "Planet," of 80,000 cub. ft. capacity, belonging to Mr. Singer, will be used in the race.

Balloon Ascent.

On September 1st, the Club balloon made an ascent from Battersea, the passengers being Lieuts. Reginald Gregory, B. V. Layard and T. J. Cull, all of H.M.S. "Thames."

Flying Grounds at Shellbeach.

Club House.—The Committee of the Aero Club are proposing to take over Muscle Manor for a Club House on the flying ground. In order that this may be effected, and in view of the very large expenditure which has already been made at Shellbeach, the Committee appeal to the Members for special subscriptions for this purpose. The Golf Course will be taken over for the use of Members, together with the shooting rights extending over 1,000 acres.

The following sums have already been promised:—

A. Mortimer Singer, £25; Frederic Coleman, £10; F. K. McClean, £10; Hon. Maurice Egerton, £10; F. P. S. Harris, £10; J. T. C. Moore-Brabazon, £5 5s.; Mrs. J. T. C. Moore-Brabazon, £5 5s.; A. E. George, £4 4s.; H. Massac Buist, £2 2s.; Kenric B. Murray, £2 2s.; C. R. Park, £1 1s.

Telephone.—The telephone has now been installed. Members wishing to telephone there are requested to ask

for Shellbeach, Minster, Sheppey, no number being required. The telephone is installed in the Club House, and also to the sheds on the grounds.

Erection of Sheds.—Members wishing to erect sheds at Shellbeach are requested to apply to the Secretary, who will supply all information.

Members visiting the flying ground are requested to have with them their membership cards, as strict instructions have been given to admit only Members to the flying ground.

Railway Arrangements.—The following reduced fares have been arranged with the railway company for members visiting Shellbeach:—

1st Class return, 8s.; 2nd Class return, 6s. 6d.; 3rd Class return, 5s.

Tickets available for one month from date of issue.

Members desiring to avail themselves of these reduced fares are required to produce vouchers at the booking offices. Vouchers can be obtained from the Secretary of the Aero Club. Trains leave Victoria, Holborn, or St. Paul's.

For the convenience of Members, the best train is the 9.45 a.m. from Victoria, arriving at Queenborough 10.55. At Queenborough change to the Sheppey Light Railway for Leysdown (Shellbeach), which is $\frac{3}{4}$ -mile from the flying ground.

HAROLD E. PERRIN, Secretary.

166, Piccadilly, W.



Diary of Forthcoming Events.

SOME idea of the impetuous and absurd way in which aviation meetings are being organised may be gathered from the following list, where it will be seen that many of the dates clash, so that it will, of course, be impossible for them to hope to have at all a representative entry list:—

1909.	
Sept. 12-20 ...	Brescia Meeting.
Sept. 19-24 ...	Dieppe Meeting.
Sept. 20-Oct. 5	Spa Meeting.
Sept. 25-Oct. 17	Paris Aero Show.
Sept. 26-Oct. 6	Berlin Meeting.
Oct. 3-10 ...	Frankfort Meeting.
Oct. 3-17 ...	Juvisy Meeting.
Oct. 11-18 ...	Antwerp Meeting.
Oct. 14-28 ...	Marseilles Meeting.
Oct. 18-23 ...	Blackpool Meeting.
Oct. ...	Genoa Meeting.
Nov. ...	Nice Meeting.
1910.	
Spring ...	Cologne Meeting.
July-Aug.	Havre-Trouville.
Sept. ...	Bordeaux Meeting.

"FLIGHT."

May be
That angels fell from grace with broken wings
And became men—a fallen race
Condemned to pay the price of misdoings—
Their own wings to contrive? Wings of less grace.

Yet wings
Maybe, of greater worth? Not these the gift
Of angels or of gods bestowed at birth,
But wings of merit which, alone, can lift
Mere man of dust above the things of earth.
So be it
Of he'venly grace or human power the gain,
Man flies triumphantly, and flying, sings
Of world-wide empire which he shall obtain
Of his own effort—on his self-made wings.

Mablethorpe.

GEO. STURGESS.

PROGRESS OF FLIGHT ABOUT THE COUNTRY.

(NOTE.—Addresses, temporary or permanent, follow in each case the names of the clubs, where communications of our readers can be addressed direct to the Secretary.)

Model Aeroplanes at Wembley Park.

ON Saturday last two competitions for model aeroplanes were carried out at Wembley Park under the auspices of the Aeroplane Club. Fine weather prevailed, and a very interesting afternoon was spent. The first competition was for models exhibited at the recent Sport and Travel Exhibition at Olympia, for gold, silver and bronze medals presented by the Aerial League. Five of the thirteen entrants took part, but no definite awards were made.

In the second contest there were no entrants in the heat-motor-driven section, but nine competed in the two classes for models driven by elastic springs. In Class I, for machines not exceeding one square foot of surface, Mr. W. Burge Webb secured first prize, while Mr. W. G. Aston was second; and in the second class, for bigger machines, Mr. G. P. B. Smith was first and Mr. Burge Webb second. Mr. Smith's model was of the biplane type, with the bottom plane curved up to meet the top plane, and with this model Mr. Smith secured the two longest flights of 16½ secs. and 18½ secs. respectively.

Coventry Aero Institute (18 and 19, HERTFORD STREET).

A VERY enthusiastic meeting was held on Tuesday night, at the King's Head Hotel, Coventry, when the formation of this institute was decided on. Mr. P. V. Pugh was in the chair, and Mr. Eric W. Walford, who has done such good work in connection with the Coventry Motor Club, acted as hon. secretary. The idea is that a technical institution should be formed, as opposed to a club, with a view to advancing knowledge on the subject, assisting inventors, providing a ground in the neighbourhood, a technical library, &c. Owing to its industries, Coventry is in a position to manufacture practically the whole of an aeroplane from home products. The local weaving industry appears to be able to deal with the fabrics, while the cycle and motor firms have the necessary plant for dealing with the rest of the machine.

Liverpool Aviation Society (1, EXCHANGE STREET, WEST).

AT the inaugural meeting of this Society, held on the 8th inst., to which we referred last week, Mr. Marks said he was concerned with the formation of the Liverpool Aero Club, in connection with which four gentlemen had formed a fund of £700, and he mentioned that they were willing to merge with the Aviation Society. They had been negotiating for the use of Aintree race course for experimental purposes.

The Society proposes to arrange a series of lectures and debates, then to organise exhibitions and competitions for models, and eventually to have contests for man-lifting machines. Promises of support have been received from Major Baden-Powell, Hon. C. S. Rolls, Mr. W. H. Lever, M.P., Mr. S. F. Cody and many others.

Manchester Aero Club (9, ALBERT SQUARE).

VERY largely attended and immensely enthusiastic was the meeting held on the 9th inst. at the Midland Hotel, Manchester, for the purpose of forming an Aero Club for Manchester. As the result of a preliminary meeting, a set of rules, almost entirely based on those of the Aero Club of the U.K., had been drawn up, and these were submitted and approved, and a Committee appointed.

Sir W. H. Bailey, who presided, in opening the meeting, thought that Manchester was called to occupy in aeronautics as great a position as she held in other departments of science and invention. He thought there were great facilities in the neighbourhood, as there was no more suitable aerodrome than the flat lands of Cheshire. He also mentioned that the Trafford Park directors (of which he is one) would give their best consideration to the requirements of the Club. He thought the Park offered a fine landing place, and he suggested that there was no better flying line than over the Ship Canal. As a result of his own experience, he advised inventors to thoroughly thrash out their plans in the drawing office before commencing actual construction work.

Sir W. H. Bailey was elected Hon. President of the Club, and Mr. F. Ashworth, President of the Manchester Chamber of Commerce, a Vice-President, while the Committee consists of Messrs. E. H. Coombs, J. E. Leigh, G. S. Lipman, Leo Swain, Sidney Norris, F. J. Norbury, Cedric Lee, G. H. Woods, E. A. Gadd, and — Reeve; with the Hon. Secretaries, Mr. M. Stafford Threlfall and Mr. Charles Stevenson. Mr. E. H. Coombs was appointed Hon. Solicitor, and Messrs. Smethurst and Sharp, Hon. Auditors.

Mr. H. Nuttall, M.P., Mr. Joynson-Hicks, M.P., Mr. S. F. Cody, and M. Blieriot were elected hon. members, and the latter sent a message of congratulation, while similar messages were received from the London and Liverpool Clubs and MM. Voisin Frères. Already the membership exceeds 200.

The Club is arranging to assist Mr. Cody in his flight between London and Manchester, and also between Manchester and Liverpool. It is proposed that strips of canvas, 40 ft. long by 4 ft. wide, should be laid down at various points, and signallers, with flags, will also be stationed at different places to guide Mr. Cody in his journey.

Midland Aero Club (THE BUNGALOW, STECHFORD, BIRMINGHAM).

AT a Council meeting held on the 8th inst., a great amount of business was transacted, which indicates that the Club is destined to do a great deal of useful work in promoting aviation in the Midlands. Capt. John H. Cooke, F.G.S., F.L.S., of Wolverhampton, presided, and after a provisional programme of meetings, lectures and model exhibitions had been decided upon, it was decided to elect a General Purposes Committee consisting of Messrs. F. H. Pepper, Charles Sangster, Gilbert Dennison, Herbert A. Pepper, G. E. Osmond and Ivy-Rogers, the Hon. Sec.

The question of flying grounds came before the Council, and it is hoped that a definite announcement will be made within a few days, and it is proposed that a fund should be started with the object of obtaining flying machines and other equipment. The Council, too, are making every endeavour to secure the attendance of prominent aviators at Birmingham as soon as possible.

Scottish Aeronautic Society (185, HOPE STREET, GLASGOW).

ON Saturday last the Scottish Aeronautic Society held their first kite-flying demonstration at Houston, and the experiments proved of great interest to the large gathering of members. Among the large number of kites which were flown, one of the Hargreave box-type, sent up by Mr. D. Gordon Anderson, was conspicuous for the successful way in which it was manipulated. Mr. W. G. Duncan, the Hon. Secretary, flew a kite modelled after Dr. Barton's design, which attracted a good deal of attention, while Mr. M'Gill had a kite of his own design which had 60 sq. ft. of surface. Other exhibitors were Mr. Henderson, who had a small Indian kite and one with tetrahedral cells, as experimented with by Dr. Graham Bell, while Mr. Adamson had a small Hargreave kite.

Shropshire Aero Club (3, CASTLE STREET, SHREWSBURY).

AT a meeting held on the 9th inst., the conclusion was reached that it was desirable to form an Aero Club for Shropshire. A general meeting of the present members and of all those desirous of joining will be held at the George Hotel, Shrewsbury, on the 24th inst., at 8 p.m. A glider is being built so that members may obtain practice, and it is hoped that later on funds will be forthcoming to purchase a full-sized machine. At present, Mr. Eric Billing, 3, Castle Street, Shrewsbury, is acting as Hon. Sec., and he will be pleased to answer any enquiries regarding the Club and give all particulars regarding membership.

Yorkshire Aero Club (59, WADE LANE, LEEDS).

AT the meeting held on Tuesday evening at Leeds for the purpose of forming an Aero Club for Yorkshire, the audience numbered 100, and included many of the prominent engineers of Leeds. Mr. Herbert Dunn, C.E., who brought the idea into being, presiding, said that the encouragement they had already received augured well for the future, and he hoped that the well-known men throughout the county would give their support to the Club.

The sub-committee submitted a resolution which set forth that the Club should be a county organisation, with headquarters at Leeds, with branches in various parts of Yorkshire; that the chief objects should be to encourage the study of all branches of aeronautics; to organise flying ascents, exhibitions, races, and trials for records.

The resolution was carried and the provisional rules which had been drawn up on the lines of the Aero Club were adopted.

With regard to affiliation with the Aero Club of the U.K., Mr. H. A. Jones suggested that they should act with the Liverpool, Manchester and Leeds clubs in arranging for proper representation on that important central authority. It was, therefore, decided to leave the matter over for the present.

Twelve of the sixteen places on the Committee were filled, the Provisional Committee of seven being elected, as well as two other gentlemen who had taken a prominent part in the formation of the Club, while the other three were elected by ballot. At present the Committee consists of Messrs. Herbert Dunn (Leeds), H. A. Jones (Bradford), Albert Farnell (Bradford), Ivan Fawcett (Leeds), Norman Hirst (Leeds), F. Sheridan (Leeds), R. G. Macpherson (Leeds), Herbert Knowles (Leeds), E. E. Faiers (Frisizinghall), Dr. Vaughan Bateson, F.R.G.S. (Bradford), S. W. Fitzgerald (Leeds), and R. J. Isaacson (Leeds).

BANQUET TO M. BLERIOT.

ON Wednesday evening M. Bleriot was entertained at a banquet at the Cecil Hotel, under the auspices of the Aeroplane Club, in honour of his flight across the Channel, about 400 guests being present. Very fine models of aeroplanes—the Bleriot and Farman machines being lent by the Motor Supply Co.—formed a feature in the decoration of the room.

The Lord Mayor presided, accompanied by the Lady Mayoress.

The toast of "Success to Aviation" was proposed by Mr. W. Burdett-Coutts, M.P., who said that he believed the majority of those present were possessed of a strong desire that England, the home of so many great inventions for the benefit of mankind, should not lag behind in this the last and most wonderful science. The present state of the science of aviation seemed to illustrate the old proverb "that the largest room in the world was the room for improvement." Nevertheless, the aviator's lot was a happy one. He might injure, or possibly lose, a limb, his features might occasionally be rearranged, yet was not this very danger the real fascination, and where danger was who would say that the English inventor would not find his true vocation.

Sir Hiram Maxim, in responding, said it was very gratifying to him to find that after having spent so much time, money and thought on flying machines during the past sixteen years that flying was not a subject of ridicule at the present time, and he was glad to see the good fellowship which existed among the men who fly. The greater number of failures in flying machines was due entirely to the motors, which in his opinion were not made with a sufficient degree of accuracy. The aeroplane engine to be a success must be as efficient as a marine engine, a locomotive, or a Maxim gun. At the present moment he was experimenting with an engine with steel cylinders, which would weigh about $1\frac{1}{2}$ to $1\frac{3}{4}$ lbs. per horse-power, or in other words, an engine which would develop 2-horse-power for the weight of one barndoor fowl.

The Lord Mayor, in proposing the toast of "M. Bleriot," said we were living in a wonderful age, and the year 1909 would rank as one of the most wonderful in it. "Will it not be recorded in that year that the conquest of the air was successfully accomplished?" He said a stupendous change in locomotion was coming over the world; in fact, a new world would shortly be opened to us. In the

not very distant future we should be able to hail an aeroplane, and say, "I should like to be taken to the Champs Elysées, Paris," and we should arrive there in the course of a few hours. It was most befitting that the honour of the cross-Channel flight should have gone to a Frenchman, because there is no nation in the world which has striven more to make aviation successful than the French nation. Madame Bleriot was here to-night, he said, a proud woman, to share in the triumphs of her husband.

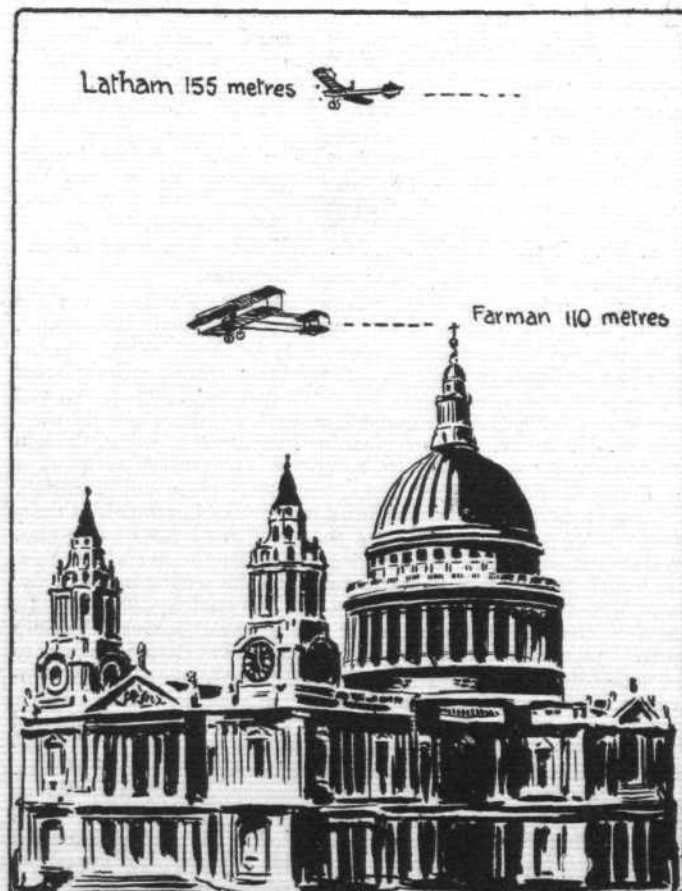
The Lord Mayor then presented M. Bleriot with the gold cup offered by Capt. Windham to the first person to fly the Channel.

M. Bleriot, in responding, said he would like to utter one thought, and that was that the overwhelming appreciation bestowed upon him should be extended to his comrades in France and elsewhere, who were doing so much to solve the problem of flight. There was no doubt that the science of aviation was developing at gigantic speed, and it would continue to do so by means of constant emulation, which would be the result of well-organised competitions and encouragements offered by the numerous institutions and individuals concerned in aviation. Within the near future such progress would be made as would constitute aviation as a practical science and not merely a sport as it was at present regarded. As far as he was concerned, within a few months he hoped to have created a novel flyer which would enable man, like the seagull, to rest on the surface of the sea, and then rise and commence flying again without fear of collapsing.

Capt. Windham, proposing the toast of "The Visitors," announced that Mr. H. Keen, one of the members of the Aeroplane Club, offered a prize of £500 in cash or a gold cup for a flight over London in order to give the British public an idea of what an aeroplane was capable of.

The toast was responded to by Admiral Sir Wm. Kennedy, R.N., and Lieut. Shackleton, R.N., M.V.O.

The health of the chairman was proposed by Sir Francis Stanhope Hanson, and the Lord Mayor, in responding, said he had been requested to announce that Mr. C. Friswell offered a prize of £500 for the first heavier-than-air machine which would remain stationary in the air for a period of one minute. In conclusion, he thought it would be possible in the near future to arrange for the use of Wormwood Scrubs for the purpose of experiments in aviation.



LATHAM AND FARMAN'S RECENT FLIGHTS AT RHEIMS GRAPHICALLY DEPICTED.—What their distance and height achievements are equal to if carried out on familiar ground in England. On the left the single flight of Farman is seen, reaching almost to Weymouth, whilst the three successive flights of Latham placed end on would have brought this remarkable flyer up to Lancaster and Morecambe Bay, beyond Blackpool, where the proposed Aviation Week is to take place next month. On the right the height event is seen, with St. Paul's Cathedral (to scale) as a guide for comparison.

MR. CODY AND HIS AERIAL EXCURSIONS.

MR. CODY will have to be careful or he will find himself besieged at all hours of the day by people who wish to have a lift across Laffan's Plain. On Thursday of last week, three times in succession he flew across the Plain and back again, each time taking with him an officer of the Royal Engineers attached to the balloon factory. Capt. Brooke-Smith was first, and he was followed by Capt. King and Capt. Carden. Then Mr. F. J. Robinson, connected with New Pegamoid, Ltd, the manufacturers of the Pegamoid waterproof fabric which has been adopted by Mr. Cody for the covering of his biplane, was taken for a similar trip, and to wind up the proceedings Mr. Cody took his son Leon on to Cove Common. Unfortunately, there a leak in the radiator compelled a descent, and it being impossible to repair it in the dark the machine was towed back to its shed, after a most interesting day.

The next day, the gusty weather prevented flying, and Mr. Cody spent the time maturing his plans for his flight to Manchester.

On Saturday Mr. Cody had a distinguished onlooker, the Empress Eugenie driving over from Farnborough in order to witness the trials. In the first, Mr. Cody was considerably hampered by the crowd, and only kept aloft for five minutes. He then went up again, and in order to avoid the crowds of spectators, was forced to make a rapid descent, damaging one of the planes, besides buckling three of the wheels. This was, however, set right in a quarter of an hour, when Mr. Cody went up for the last time and circled over Laffan's Plain three times.

On coming down he was presented to the Empress by Lieut.-General Smith-Dorrien and congratulated on his success.

A rather sharp accident marred the conclusion of a successful flight on Tuesday evening. After flying round Laffan's Plain at a fairly high speed, Mr. Cody decided to come down. Apparently, however, the wheels had not been properly re-adjusted after their buckling on Saturday, and when the machine touched the ground they jammed, bringing the aeroplane to a sudden standstill. The shock threw Mr. Cody from his seat, and his face was rather badly cut, but otherwise this intrepid flyer was as cheery as ever. The front of the machine was also smashed up slightly, but this damage was quickly repaired.

The Flight to Manchester.

WITH regard to Mr. Cody's intention to attempt to fly between London and Manchester, Mr. Brock, of the well-known firm of firework manufacturers, has suggested that the route should be marked by clouds of coloured smoke from shells sent up at various points to a height of 300 ft. Mr. Brock has drawn up a provisional code of colours as follows, and suggests that shells should be fired at each point until the aeroplane passes, when the next point would take up the work. Mr. Cody should have no difficulty in seeing the clouds, for they would be about 150 yards along and would remain visible for three or four minutes:—

Berkhamsted ...	Red	Birmingham	Red
Buckingham ...	Dark blue	Stafford ...	Red and yellow
Leamington ...	Yellow	Crewe ...	Yellow and blue

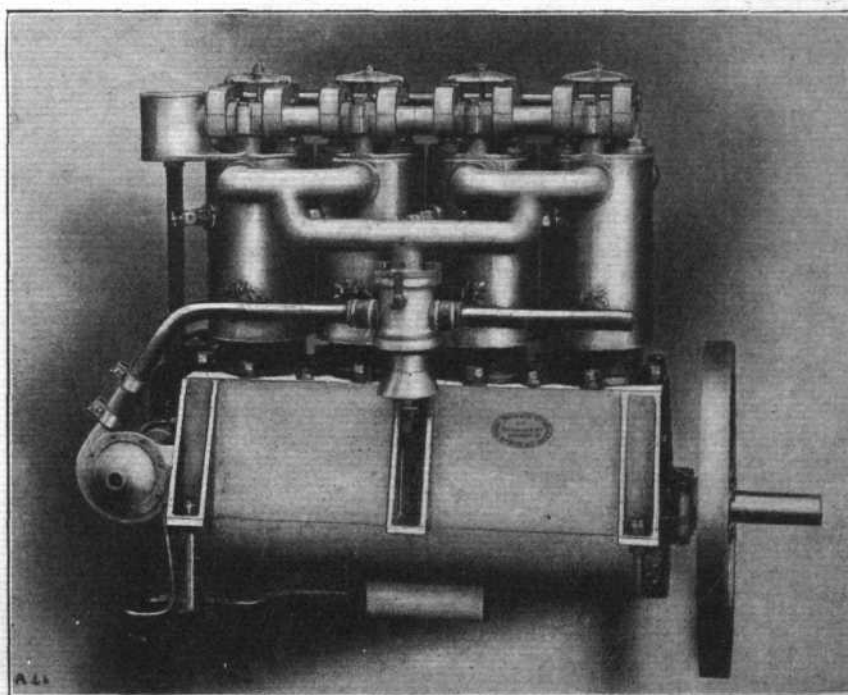
M. Bleriot Visits St. Stephens.

ACCEPTING the invitation of Sir Benjamin Stone, M.P., M. Bleriot, together with many prominent gentlemen connected with aviation in this country, visited the House of Commons on Wednesday and was conducted over the House. At the lunch afterwards, Sir Benjamin Stone presided, having M. Bleriot on his right and Mr. Lloyd George on his left, the only toasts being "The King" and "M. Bleriot."

Amongst others present were Mr. Walter Long, Mr. A. Du Cros, Mr. T. P. O'Connor, Mr. G. Renwick, Mr. Beville Stanier, Mr. Henniker Heaton, Mr. Percy Thornton, Lord Blyth, Capt. the Hon. R. Lygon, the Hon. C. S. Rolls, Col. Cody, Capt. W. G. Windham, Capt. Cave-Brown-Cave, R.N., M. Chereau, Col. Massey, C.B., Comte La Peyrouse, Dr. W. Lockyer, Mr. Hedges Butler, Mr. A. V. Roe, Mr. Alfred Norton, Dr. D. McKenzie, Mr. S. Renwick, Mr. A. P. Nicholson, Mr. E. P. Frost, and A. E. Robbins.

Teaching Ladies to Fly.

FROM Paris it is reported that the prominent aeroplane manufacturers are being inundated with letters from American and Frenchwomen who are anxious to skim around in the sky. One firm, it is stated, has decided to accept twelve lady pupils, who will be taught to fly, for a fee of £100 each.



PARIS AERO SHOW.—Among the few British exhibits at the Paris Aero Show which opens on the 25th inst., one of the most striking will be that of Messrs. Green Motor Patents Syndicate, who will have on view one of their 60-h.p. engines for aerial work. In the above photograph the 30-h.p. motor is seen from the carburettor side. It will be remembered that full details regarding the many ingenious features of this engine, including the arrangement of copper water-jackets and overhead valves, appeared in our issue of April 3rd, 1909.

AVIATION NOTES OF THE WEEK.

Barnwell Aeroplane.

ON the 8th inst. at Causewayhead, near Stirling, Messrs. Barnwell brought out their machine for another trial after completing the repairs necessitated by the accident some time ago. Unfortunately, the machine by some means got off the starting rail, landed in a ditch, and buckled one of the wheels. This was repaired the next day and another flight attempted. After running along the track for about a hundred yards, the machine rose in the air and reached a height of about twenty-five feet, when the movement of a wrong lever caused the aeroplane to fall back on itself. As a result it was considerably damaged, but Mr. R. H. Barnwell, who was in charge, escaped unhurt.

Wright-Clarke Glider.

ELSEWHERE in this issue will be found the first half of an article minutely describing a remarkably perfect glider and its operations constructed by Messrs. T. W. K. Clarke and Co. for Mr. Ogilvie. This was completed at the end of August, and was despatched to its destination on August 28th, exactly four weeks from the date of the order. It was conveyed to its destination on the South Coast at 1.15 a.m. in tow of two motor cars, arriving at 6.30 a.m. safe and sound after a 60-mile journey. Next morning it was put together, and the same day several fine glides were made, some of them 12 ft. above the ground. Mr. Ogilvie has since become quite proficient in its use, and soaring flights up to 343 yards were carried out last Sunday. From the first, Mr. Ogilvie found the horizontal steering quite easy, as also the warping of the surfaces; but the rear rudder was a little more difficult to manipulate in the early stages. Mr. Ogilvie is at present practising with this glider until such time as he obtains delivery of his full-sized Wright flyer.

Help for Coventry Flyers.

WITH a view to assisting local talent, the Coventry Radiator Company have offered to present a suitable radiator, petrol tank and lubricator to the first manufacturer building an aeroplane in the City of the Three Spires.

A Monoplane for Burnley.

MR. W. E. COOKE, of the Burnley Motor Bus Co., has ordered from Mr. Howard Wright a monoplane to carry two persons. The area of the main planes is to be 200 sq. ft., and it is estimated that the machine will weigh 750 lbs. It will be fitted with a 50-h.p. engine, with the wooden propeller coupled direct to it, and is expected to arrive at Burnley within a few days now. It is proposed to form a company to take charge of the machine and to arrange demonstrations, for which a flying ground is now being sought.

Another English Recruit to Aviation.

FOR some time Mr. A. Mortimer Singer, having purchased a Voisin machine, has been practising at Chalons, and last week he had a slight mishap which damaged the machine he was using, but fortunately he escaped unhurt. He was flying in somewhat gusty weather, when the right-hand side of the machine was struck by a squall. This caused the machine to tilt, and on Mr. Singer righting it the wind caught it on the other side, and before this could be counteracted, the aero-

plane dived down. Mr. Singer stopped the engine, and the landing was very sudden, but the aviator was prepared for it and so was able to keep his seat. He hopes to recommence practice in a few days.

A Meeting Suggested for Cumberland.

A SUGGESTION has been mooted by several members of the Carlisle Chamber of Commerce that Burgh Marsh and the adjoining lowlands along the Solway Firth, to the north-west of Carlisle, would form a suitable place at which to hold a flying meeting. The principal land-owner thereabouts is Lord Lonsdale, and naturally he has promised to give favourable consideration to the project. There are not many houses in the vicinity of the proposed ground, and the nearest villages are Burgh, Port Carlisle and Drumbergh.

Bleriot-Latham Match.

It will be seen from the official notices of the Aero Club that as a result of the inspection of the grounds at Wembley Park, both M. Bleriot and Mr. Latham have come to the conclusion that they are not suitable as an aerodrome. The arrangements with regard to their proposed match have therefore been cancelled.

Orville Wright at Berlin.

So far the best flight made by Orville Wright during his visit to Germany was that on Friday last, which lasted for 1h. 2m. 38s., during which a distance of more than 60 kiloms. was covered. A strong wind was blowing at the time, but this did not affect the flight, which was concluded by Orville Wright stopping the engine and gliding down to earth. On Saturday last the wind was blowing cool and fresh, and therefore Orville rose to a height of over 100 metres, where he found the soft breeze more to his liking. He remained up for 42 mins. 16 secs., and later took up Capt. von Kehler, but a slight derangement of the motor necessitated a return to earth after three minutes.

M. Sommer at Nancy.

THE aviation week at Nancy concluded on Sunday last, and M. Sommer, who had had the arena all to himself during the week, treated the large crowd that gathered to watch him to some splendid performances. After making a short "solo" flight he came down, and, having replenished fuel tanks, &c., made a turn of the flying ground, taking Mdlle. Larmoyer as a passenger, and afterwards a similar trip with M. Friant, a gentleman by no means a feather-weight. In the afternoon a further three trials were made. The first was of 30 mins. 50 secs., and roused the spectators to the top notch of enthusiasm; while in the second he carried his son twice round the course, and in the third M. Thiry was a passenger. Early on the previous morning he started off from his flying ground at Janville, just outside Nancy, and travelled 12 miles across country to Lenoucourt, where the annual review was in progress. He came down, and was given a great ovation by the troops. On rising again to return he passed along the lines of soldiers as though reviewing them, and then flew off at top speed to Nancy.

The previous day M. Sommer contented himself with flying short distances, mostly three times round the flying ground, a distance of between 8 and 10 kiloms. He, however, made two passenger flights; in one his sister accompanied him, while the well-known French sports-woman, Mdlle. Marvingt, was the other favoured one.

On Thursday week twice in succession M. Sommer covered three laps of the course in 10 mins., and once he went round six times in 20 mins.

On Monday last M. Sommer had an exciting experience. He had taken MM. Beltieni, Munier, Thiry and Mmes. Thiry, Larmoyer and his wife for little trips, and had just started off for another one with his little son when the radiator exploded. Fortunately he was able to land safely, and both father and son escaped unhurt.

M. Paulhan at Tournai.

DURING his stay at Tournai M. Paulhan has not been favoured with very good weather, and the strong breezes which have been prevalent have limited the flying. On the 9th inst. the wind blew strongly till nearly five o'clock, and the crowd which had waited patiently for some hours began to shout and show signs of restlessness. This caused M. Paulhan to protest. "What do you want? This is a flying meeting, not a football match! We are not the masters of time!" Although the wind had moderated but slightly, M. Paulhan was induced to make a trial, and covered twelve laps of the course, about 20 kiloms. in all. The same day M. Vandamme, on the Senine glider, made a few successful tests. Calm weather prevailed on Friday, and altogether M. Paulhan had his Voisin machine out four times. In the morning he first made four turns round the course, followed by five laps. Later he flew for 5 mins. at a height of 20 metres, and finished the day by flying for 12 mins., during which he flew over the neighbouring country. Saturday and Sunday produced no remarkable results, as none of the flights lasted more than ten minutes, but they were interesting inasmuch as M. Paulhan, finding his flying ground too small, did not keep to it, again flying over the surrounding country. An accident occurred on Sunday which rather damped the proceedings. M. Vandamme was testing the Senine glider and had risen to a height of 25 metres when the machine suddenly fell to earth. The aviator was seriously injured, his left foot as well as several ribs being broken. He is, however, progressing as favourably as can be expected.

A very fine performance was made on Monday last, when M. Paulhan flew over the country round about Tournai for 1 hr. 35 mins., eventually coming down at Taintegnies, about five miles away, at the invitation of M. Cromberg. An hour and 25 mins. later, M. Paulhan

flew back to his flying ground, and after making a circuit of the course, landed just by his hangar.

Santos Dumont Flies Again.

SINCE M. Santos Dumont made his short cross-country journey in April last he has done very little flying beyond a few "jumps" of 500 metres or so in May and June. But on Monday he once more came into the limelight with a bound by paying a visit to M. Guffroy at Buc. Some time ago these aviators made a friendly wager as to who should be the first to visit the other by aeroplane, and M. Dumont has won. He started off from St. Cyr at five o'clock, and covered the five miles which intervene between there and Buc in about five minutes, thus showing that his tiny "Demoiselle" is the fastest machine which has so far flown. On the following day he flew back again to St. Cyr.

M. Santos Dumont's Machine.

THE little machine with which M. Santos Dumont made this splendid flight has a carrying surface of only 9 sq. metres, and fitted with a 2-cyl. 30-h.p. Darracq special aeroplane motor, and with the aviator on board only weighs 118 kilogs. The bore and stroke of the motor is 130 by 120 mm. According to the *Journal*, M. Dumont has decided to make the patents relating to his flyer public property, so that anyone may build one. It is said that the cost of it is less than 5,000 francs (£200).

Delagrange in Denmark.

M. DELAGRANGE appears to be gradually mastering his Bleriot monoplane, and on Monday made some good flights at Aarhus, in Denmark, where he is now staying. The best attempt lasted for about a quarter of an hour at a height of about 40 metres. M. Delagrange is contemplating flying across the Cattegat.

Boulogne Meeting Falls Flat.

AT the time of going to press (Thursday) it appears certain that the Boulogne aviation meeting will have to be written down as not far off a failure. Captain Ferber was the only one who made any attempt to fly at the beginning of the week, and his best flight was a kilom. in a straight line, although he did better on Wednesday. Count Lambert had been experimenting during last week, but he suddenly returned to Paris on Saturday. In view of the impossibility of securing a sufficient number of entries it was practically certain that the meeting would have to be abandoned. On Sunday a crowd numbering about 10,000 was



BLACKPOOL AVIATION WEEK.—General view of a portion of the flight course, which embraces part of the splendid Golf Links. In the background the Golf Club House can be seen.

admitted to the flying ground between Wimereux and Marquise, and when it was found that there would be no flying some angry scenes took place.

On Monday it was announced from Boulogne that as there were no entries the cross-Channel flight would be postponed. To this, the Folkestone Committee replied that as far as they were concerned the arrangements were at an end, and further intimating their intention to promote, if possible, on their own, a meeting at Folkestone.

Capt. Ferber Flies Across Country.

ON Wednesday last Capt Ferber succeeded in making a cross-country flight from the flying ground at Boulogne to the beach at Wimereux, a distance of five miles, in about five minutes. After making one or two short flights along the beach, Capt. Ferber flew back again to Boulogne.

M. Bleriot too Busy to Fly.

SPEAKING to a representative of the *Echo de Paris* the other day, M. Bleriot made the interesting announcement that he had just sold his one hundred and first monoplane, and that he would get into difficulties with regard to deliveries if he did not set to work at once and give all his time to completing his machines. This has induced M. Bleriot to give up, though not without regret, his proposal to fly at Berlin; and in all probability any personal participation in other events for, at least, some time to come.

New Recruits and Trial Flights.

M. GUYOT, the winner of the last Coupe des Voiturettes Race at Dieppe, is turning to aviation, and is now experimenting at Tours with a Bleriot monoplane, after having spent some days in the works. When he has mastered the machine, he intends to tour Russia, giving exhibition flights.

During the last few days Henry Farman has been trying at Chalons a new biplane which differs in design from his others, which have proved so successful. He has made no extensive flight on the new flyer, but has expressed his satisfaction with the stability of his latest mount.

Ruchonnet, who taught himself to fly in four days, in anticipation of figuring at Rheims, has recommenced practising at Chalons, and flew for ten minutes on the 9th. Several other prospective flyers are "trying their wings" at Chalons, and a Spanish gentleman named Gesser badly smashed his Voisin machine on Thursday week by a sudden descent after making one round of the course.

M. Blanc is still experimenting close to Marseilles with his latest monoplane, the fourth he has built, which has an arrangement for flexing the wings. So far, no very noteworthy success has been obtained.

M. Sanchez Besa, who has been practising at Chalons for some time with a Voisin machine, flew for 10 kiloms. on Monday. Afterwards his machine was packed up for dispatch to Berlin, where this young aviator is booked to take part.

Flying in Germany.

IN Germany, as in Great Britain, the progress in aviation has been very slow, but it would nevertheless appear that inventors and designers are steadily working along sound lines. At the Mars flying ground, to the south-west of Berlin, Herr Grade, using a machine built by himself, succeeded in making three flights, each of

about a mile and a half in length. This so far is the best record for a German-built machine. Herr Grade now intends to try and secure some prizes, the first he will try for being the prize of £2,000 offered by Herr Lenz for the first German aeroplane to describe a figure "8" round two posts placed a kilometre apart.

Across the St. Lawrence.

IT is reported from Quebec that a Mr. Leclaire, in the employ of the Canadian Northern Railway, has succeeded in flying across the River St. Lawrence, from the Plains of Abraham to St. Joseph de Levis. Unfortunately, details of the machine used have not yet been given.

The Juvisy Fortnight.

THE directors of Port Aviation at Juvisy are sparing no pains to make their meeting, from October 3rd to 17th, even more successful than Rheims. Prizes will be plentiful and it is anticipated that the total money distributed during the week will amount to 200,000 francs (£8,000). The more important prizes put up for competition will be those presented by the Paris Municipal Council (15,000 frs.), Seine General Council (7,000 frs.), Société d'Encouragement d'Aviation (30,000 frs.), Viscount H. de Kersaint (10,000 frs.).

At the closing of the entries at ordinary fees on Wednesday, thirty machines had been entered, as follows:—

BIPLANES.

F. de Rue (Voisin).
A. Duval (Voisin).
Gaudart (Voisin).
G. Busson (W.L.D.).
L. Delagrange (Voisin).
H. Fournier (Voisin).
A. G. da Silva (Silva).
Voisin (3 Voisins).
De Baeder.
Pauwels.
Hornstein (Hornstein).
de Lambert (Wright).
J. Gobron (Voisin).
Barkers (Aviator).

Paulhan (Voisin).
M. Clement (Clement).
H. Rougier (Voisin).

MONOPLANES.

L. Delagrange (2 Bleriot).
R. Nau (Nau).
Bonnett-Labranche (A.B.L.).
G. Busson (W.L.D.).
J. C. Koechlin (Koechlin).
R. C. de Nabat (Koechlin).
Jacquelin.
L. Breguet (Breguet).
Marquezy.
Saulnier.

Berlin Flying Week.

A DETERMINED effort is being made by those in charge of the arrangements to ensure the success of the proposed flying week at Berlin from September 26th to October 3rd, and the German Emperor is taking a very active interest in the organisation. His Imperial Majesty is presenting a cup, and the City of Berlin is doing likewise, whilst there seems every probability of the prize list exceeding £8,000. The contests will be held under the patronage of the Imperial Aero Club of Germany. Apart from the Duration Competition, for which the Berlin Cup and prizes of £2,000, £750 and £250 will be awarded, there will be speed, altitude, passenger carrying, and other contests very much on the same lines as the programme at Rheims. To ensure the erection of hangars, entries should be sent in at once to the Deutsche Flugplatz Gesellschaft, 89 and 90, Lützowstrasse, Berlin, where they will be received up to September 24th.

Spa Meeting Proclaimed.

THE Aero Club of Belgium has issued a notice that the Spa Flight Meeting is unauthorised by them, and therefore any aviators taking part will be disqualified for all international events.

AIRSHIP AND BALLOON NEWS.

"Zeppelin III" Travels to Frankfort.

ALTHOUGH "Zeppelin III" reached Frankfort safely, the journey from Friedrichshafen, on Saturday last, was not accomplished without incident, as during the first part of it one of the motors gave trouble, and eventually broke down. Lake Constance was left at five o'clock in the morning, and the airship was safely anchored in the Exhibition grounds at Frankfort shortly after half-past nine.

King of Saxony Sails in "Zeppelin III."

ON Thursday of last week, the Zeppelin works at Lake Constance were visited by the King of Saxony, who spent a long time examining the details of the big dirigibles and went for a couple of trips with Count Zeppelin in the "Z. III." The first was from Manzell to Uberlingen and back, over Constance, Reichenau, and Singen, and lasted a couple of hours, while during the second trip the King was taken to Friedrichshafen. In the evening a series of experiments were carried out with wireless telegraphy between the dirigible and the land, and these yielded such good results that they are to be continued.

Zeppelin Polar Expedition.

AT a conference between Prince Henry of Prussia, Count Zeppelin, and Professor Hergesell, held at Hemmelmark, Prince Henry's summer home near Kiel, the main outlines of the proposed German Arctic Airship Expedition were laid down. Officially the objects of the expedition are defined as "The exploration of the unknown Arctic Polar Sea by means of a dirigible airship, and the development of the airship for the execution of scientific work." For the purpose of giving the scheme a broad national foundation, the Honorary Committee will be chosen from leading men in scientific, financial and industrial circles, while the German Emperor has accepted the office of "Protector."

An Excursion to Mannheim.

COUNT ZEPPELIN on Wednesday took a very distinguished party for a trip to Mannheim, the passengers including Prince and Princess August Wilhelm of Prussia, the Duke of Saxe-Coburg-Gotha, Prince Philip of Coburg, and Mr. Orville Wright. At the same time as the big dirigible left the Exhibition grounds, the "Parseval III" rose and raced alongside for some distance. The descent at Mannheim was made on Friesenheim Island, and later in the day the return journey was made safely, although not without incident, for one of the motors developed trouble which prevented the vessel from ascending on Thursday.

The German Emperor has asked Count Zeppelin to

visit Wurtemberg, so that the airship may take part in the manoeuvres there.

"Gross II" Caught in a Tree during "War."

AMONG other things, the German Army manoeuvres of this year are noteworthy in that a dirigible balloon was employed by one of the opposing forces, although it had a somewhat inglorious end to a brief career. On Monday, the "Gross II," which had been selected for the experiment, and was attached to the "Blue" force, rose over Ballenberg, just by Neustettin, during the morning, but was soon lost to view in the thick mist which lay over everything. During the evening, news reached the "Red" headquarters that the airship had been caught in a tree and captured by their forces. The vessel had been fitted with wireless telegraphy, so as to enable it to keep in communication with headquarters. When the airship descended below 4,000 ft. she had to indicate same by hoisting a red flag, and was then considered out of action, and was not entitled to make use of the wireless installation.

"Republique" at the Manoeuvres.

As a result of rapid work, the engineers succeeded in making the "Republique" fit for service again in much shorter time than was anticipated, and on Monday she was once more in her element and at La Palisse, taking part in the manoeuvres. Three trips were made on that day, the longest being of 25 miles, but they were in the nature of trial trips. On Wednesday, however, she was at the disposal of the Commander-in-Chief, and carried a Staff Officer for the purpose of taking observations. The airship rose to a height of 1,000 metres, made a circuit of 100 kiloms., stopping several times to make observations, and then, dropping to an altitude of 150 metres, these notes were dropped in a bag to the friendly army.

Great Britain's Gordon-Bennett Balloon.

IT will be seen from the official notices of the Aero Club that the balloon to be used by Mr. F. K. McClean in the Gordon-Bennett Race, which starts from Zurich on October 3rd, will be the "Planet," which has recently been constructed by Messrs. Short Bros. for Mr. A. M. Singer. The envelope, made of "Continental" rubber fabric, is of 2,200 cubic metres, or about 79,000 cubic feet, this being the limit for the race. Among the improvements fitted to the balloon may be noted the detachable neck hoop, a detachable valve with rain protector, a feed-pipe, a ripping panel, and a special arrangement of the rain seam for the protection of passengers in the balloon car.

✱ ✱ ✱ ✱

WANTED, A PRIZE FOR A LONDON FLIGHT.

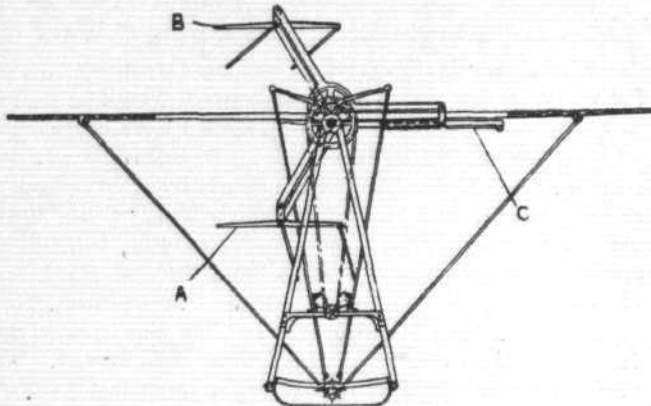
CURIOUSLY, although there are many prizes offered concerning flights to cities in the Provinces, so far no inducement to make London the finishing point has been put forward. This should be remedied without delay, and we hope some wealthy patron of the new art of flight will make himself famous by offering a reasonably substantial sum for the first British flyer, who, under proper conditions, in a British-made machine, shall travel across country, without alighting, to some previously

designated (and approved) spot within 5 miles of Charing Cross. The starting point to be not less than 25 miles measured in a straight line from Charing Cross. At least 24 hours' previous notice should be given of any attempt. By this means such an object lesson could be given to the inhabitants of the Capital of the World that would carry more conviction of the great future in store for aviation than all the descriptive articles of performances elsewhere can ever hope to attain.

INVENTORS' IDEAS.

FEATHERING PADDLE-WHEELS.

THIS describes an arrangement of eccentrics for feathering a paddle-wheel for lifting aeroplanes. The blades, A, have just reached the



end of their working stroke; the blades, B, are feathering, while those at C are at the middle of the downward stroke.—E. E. Lindkvist, 16,941 of 1908.

CORRESPONDENCE.

*. The name and address of the writer (not necessarily for publication) MUST in all cases accompany letters intended for insertion, or containing queries.

PROPELLER ADVERTISEMENTS.

To the Editor of FLIGHT.

SIR,—Until the Watford Engineering Co. produces a 14½-in. "Beedle" propeller which will lift 2 lbs. dead weight at any speed under 1,580 r.p.m. on less than 75 amps at 200 volts, they cannot justly claim not to have been beaten by the "Cochrane."

Yours faithfully,

WILLIAM COCHRANE.

PROPELLER THRUST.

To the Editor of FLIGHT.

SIR,—Can you tell me what is the utmost thrust per horse-power that can be got from a perfect propeller?

Quoting from the lift and drift experiments given in the issue of February 6th, 1909, the best curvature gives a ratio of lift to drift of 15 to 1, so that in the propellers so far evolved there appears to be a great loss of power.

Will you or some kind reader of your excellent paper please enlighten me?

Yours respectfully,

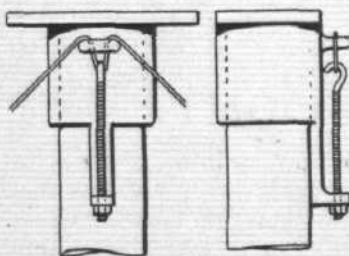
Marple.

H. G. DAWSON.

INGENIOUS FITMENTS.

To the Editor of FLIGHT.

SIR,—I trust this sketch of a combined strut-socket and wire-strainer will be of sufficient interest to readers of FLIGHT to warrant reproduction. The idea is so simple that it will be unnecessary for me to explain the illustration, but the following are the advantages claimed for the device:—Extreme lightness, as it takes the place of two turnbuckles, and in some instances dispenses with six wire-attachment eyes. For the same reasons it is cheap, and the wire is attached much more easily and quickly than by other methods. It offers no head resistance, being immediately behind the socket and strut, and it has no left-hand screws, which are often difficult to replace in case of loss. Patents are pending which cover several variations of this arrangement, and I shall be pleased to send further particulars to prospective users. I may mention that Messrs. Handley Page, Ltd., are taking up the manufacture of same, and can give early deliveries. Wishing FLIGHT continued popularity and success,



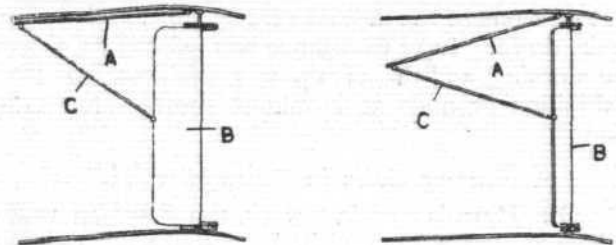
Handley Page, Ltd., are taking up the manufacture of same, and can give early deliveries. Wishing FLIGHT continued popularity and success,

Elland.

I am, yours faithfully,
F. BROCKWAY.

INTERCONNECTED RUDDERS.

THIS patent describes the use of interconnected vertical and horizontal rudders. The horizontal steering-plane, A, is connected



to the vertical rudder, B, by a rod, C, and any movement of B will be accompanied by a corresponding change in the position of A. The claims also cover the use of a pair of rudders so connected that they move towards or away from each other.—H. C. Lobnitz, 9,235 of 1909.

BASIC FORMULÆ.

To the Editor of FLIGHT.

SIR,—The conquest of the air is still proceeding at a rapid pace, and the cross-Channel flight of M. Bleriot marks a new era. One of the most important signs of its coming within thoroughly practical regions is the production of formulæ bearing upon it. Major Squier, of the Signal Corps of the U.S. Army, who, I understand, has been recently appointed by the U.S. Government as head of their newly-created Aviation Department, read a paper a short time since, on "The Present Status of Military Aeronautics,"* in which he went very carefully into the principles governing the construction and flight of aeroplanes. He gives the formula for a single plane surface, $P = 2 k \sigma A V^2 \sin \alpha$, where P is the pressure supporting the plane, and causing it to rise, k is a constant, σ the density of the air, A the area of the plane, V the relative velocity of translation of the plane through the air, and α the angle of flight. Transposing, he gives the equation

$$A V^2 = \frac{P}{2 k \sigma \sin \alpha}$$

He then points out that, if the pressure and the angle of flight are maintained constant, in, of course, a constant medium, the equation assumes the form, $A V^2 = \text{constant}$, or the area of the surfaces required to support an aeroplane is inversely as the velocity at which it is driven. At 40 miles per hour, the supporting area measures 500 sq. ft. If the speed were increased to 60 miles per hour, the supporting plane need only be 222 sq. ft.; at 80 miles per hour it would be reduced to 125 sq. ft.; and at 100 miles per hour 80 sq. ft. would be sufficient. These figures, I think, are of very great importance, showing, as they do, the great value of the speed at which the aeroplane is driven. If an aeroplane is to be of any value for attack, it must be made as small as possible, or in other words, the speed must be raised as much as possible. On the other hand, Major Squier also gives formulæ for the power required to drive an aeroplane. Without going very much into the details of the calculation, it may be mentioned that he gives the power required, as proportional to the cube of the speed. All of these formulæ will be recognised as very similar to those that rule in all engineering problems, where fluids are dealt with. In ventilation, and compressed air problems, it will be remembered that the resistance opposed to the passage of the air varies as the square of the velocity, and the power required to move the air varies as the cube of the velocity. Moving an aeroplane, or any airship through the air, is in fact the converse of moving air through any duct or gallery, or mine passage. Major Squier points out also how important the question of skin-friction is. Of course, skin-friction increases with the area of the supporting planes. Skin-friction must be a very large item in the resistance offered to the passage of dirigible balloons through the air. Skin-friction again is the important item in the problem of moving air through ducts, &c., and in moving ships through the water. It is the rapid increase of the skin-friction, with the velocity, which causes the great increase of power required to drive the great ocean liners, and the large battle-ships, through the water.

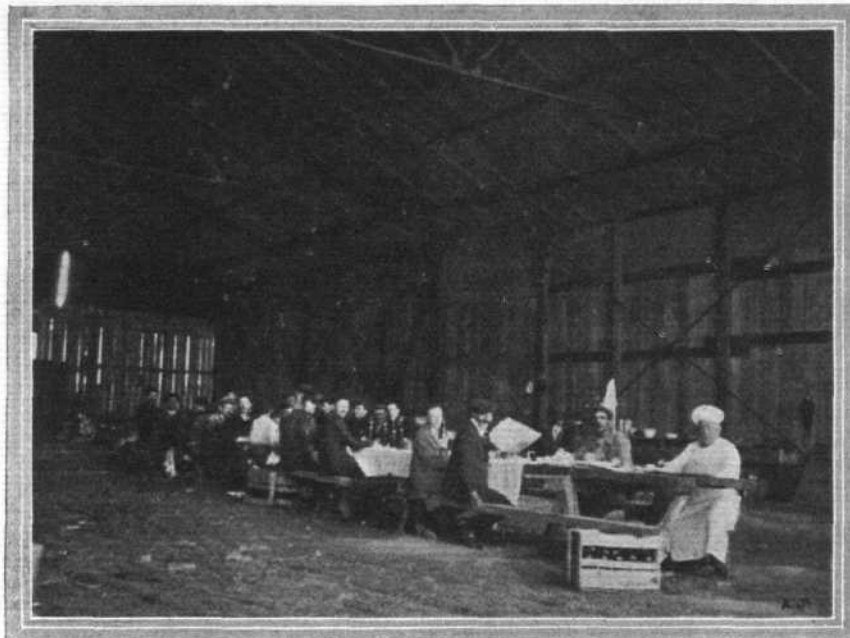
W. WINDHAM.

* This Paper was reproduced in full in FLIGHT over a series of issues commencing February 27th, 1909.

—AND THE MECHANICIANS.

To the Editor of FLIGHT.

SIR,—I see in your last week's issue a photograph of people eating in the Grand Stand at Rheims. The enclosed photograph



shows the mechanics, &c., at lunch on Sunday (last day) of the Rheims Aviation Week.

Maida Vale.

Yours faithfully,

JULIAN A. HALFORD.

DISTANCE FOR STARTING.

To the Editor of FLIGHT.

SIR,—Could you or any of your readers tell me the average distances travelled along the ground by these machines before rising: Antoinette, Bleriot, Voisin, and Cody. Wishing FLIGHT every success,

Oxford Street.

I remain, yours truly,
D. E. GOMME.

ENGLAND'S AVIATION WEEK.

To the Editor of FLIGHT.

SIR,—This important event is intended to be held at Blackpool in October.

From a comparatively small beginning it has developed into a matter of national importance. The cost has correspondingly increased, and to secure the leading aviators inducements must be offered which, without outside help, will be beyond Blackpool's resources.

The estimated cost will be about £17,000. Blackpool has responded splendidly, and I now confidently appeal to the patriotism of the British people for that further support which will guarantee the meeting being one worthy of the traditions of the English race.

The Mayor of Blackpool will be pleased to receive promises of cash prizes, or names of subscribers to the guarantee fund.

Subscribe at once. Do not delay. Do it now.

I am, yours truly,

TOM BICKERSTAFFE,
Chairman of the Aviation Committee.

Re BLACKPOOL, FOLKESTONE, &c., &c., AERIAL GYMKHANAS.

To the Editor of FLIGHT.

SIR,—I observe with great regret the daily increasing number of proposed flying meetings, which are billed to take place all over England this year. This feverish activity of popular summer resorts to outdo each other and get there first, in order to bring a crowd of sightseers to foot the winter's bill, may have its advantages from the local tradesman's and hotelkeeper's point of view, but is otherwise to be deprecated.

Such shows can only procure the services of a few of the present well-known flying men at a high price, which means putting money

into the pockets of half-a-dozen or so foreigners. On the other hand, if these meetings were arranged to take place, say, next spring, it would give the Englishman a chance to get his tackle together, and possibly by then some of these many thousand pound prizes would go to advance the industry in this country. Under any circumstances, the weather in autumn is a distinct bar to a successful English meeting, and the absence of satisfactory flights might tend to damp the general public's keenness for future exhibitions. I contend that the Aero Club's duty should be to watch the interests of English aviators and "to make haste slowly."

Yours faithfully,

"HOMOC."

CROSS-CHANNEL BALLOONING (M. P. SOUVESTRE'S TABLE).

To the Editor of FLIGHT.

SIR,—I noticed that in the list of cross-Channel voyages made by balloons which was published in FLIGHT a few weeks ago, my crossing in the "Ban-shee" of December 11th, 1908, was omitted. This voyage was of some interest because it constituted a record distance from London by a member of the Aero Club. I left Battersea at 9.15 p.m., December 11th, and descended at Crailsheim in Wurtemberg, 10.15 a.m., December 12th, a distance of 485 miles in 13 hours. Further, my crossing of the Channel was the fastest ever made. I noticed that the *Daily Mail* claimed that Bleriot's crossing was the fastest ever done, which is incorrect. I left the English coast at New Romney and reached the French coast at Boulogne. From these two points

the distance is 35 miles, and my crossing occupied 37 minutes, which is at the rate of 56½ miles per hour!

This was the third occasion on which I crossed the Channel by balloon.

Yours faithfully,

JOHN DUNVILLE.

[We shall welcome any further additions for this table so that we may have it as complete as possible when re-published.—ED.]

To the Editor of FLIGHT.

SIR,—I note from FLIGHT that you wish to obtain a complete list of cross-Channel ballooning flights, and I am therefore troubling you with a note of the eleven Channel flights made by me:—

Date.	Departure.	Descent.	Occupants.
Oct. 12, 1897	Eastbourne	Domart, France...	C. F. Pollock
July 29, 1899	Crystal Palace	Woincourt, France	Percival Spencer, C. F. Pollock
Feb. 3, 1906	Wandsworth and Putney Gas Works	Bermonville, near Yvetot, France	Martin Dale, C. F. Pollock
Sep. 30, 1906	Paris	Sittingbourne, Kent	Prof. A. K. Huntington, C. F. Pollock
Feb. 21, 1907	Chelsea Gas Works	Stavelot, near Spa, Belgium	Hon. Mrs. Assheton Harbord, C. F. Pollock
July 10, 1907	Beckenham	Sully sur Loire, France	Leslie Bucknall, C. F. Pollock
Jan. 31, 1908	Chelsea Gas Works	Verdun, France	Hon. Mrs. Assheton Harbord, C. F. Pollock
Feb. 18, 1908	Chelsea Gas Works	Arbois, Jura, France	Philip Gardner, C. F. Pollock
Nov. 21, 1908	Chelsea Gas Works	Baelen-Wezel, near Moll, Belgium	Mr. and Mrs. John Dunville, Philip Gardner, C. F. Pollock
Dec. 11, 1908	Chelsea Gas Works	Crailsheim, near Stuttgart, Germany	John Dunville, Philip Gardner, C. F. Pollock
Feb. 5, 1909	Chelsea Gas Works	Crepy en Valois, near Paris	Philip Gardner, C. F. Pollock

Yours truly, C. F. POLLOCK.

AVIATION TERMS.

To the Editor of FLIGHT.

SIR,—May I suggest that either "Flightground" or "Flightway" would be good, simple English words for any place where flying is carried on.

Yours faithfully,

Cheltenham.

JOHN BROWNING.

AVIATION IN THE PROVINCES.

To the Editor of FLIGHT.

SIR,—Having the interests and progress of aviation deeply at heart, and gladly noting that Flight Weeks are already being organised in more than one provincial town, I am desirous of bringing about such a function in the vicinity of this splendid old city. To that end, I am communicating with the Lord Mayor of York.

As stated in my previous advocacy—in FLIGHT—of York as a venue for aeroplanists, there is an admirably suitable tract of unobstructed land just on the outskirts of the city—known locally as “Knavesmire.”

It is claimed for old York, and rightly I think, to be “the world’s most picturesque city,” and abounding in archaeological interest, being the oldest in the United Kingdom.

There is an excellent train service from the South, and all parts. If any readers can further this matter by co-operating with me, I would welcome such co-operation.

I will take this opportunity of saying that the recent Sheffield movement, “Sheffield Co-operative Aviators,” has my entire sympathy and best wishes, more particularly as I was a resident of “Steelopolis” for five years (until 1907) in an engineering capacity.

I should be pleased to receive further particulars of this association, and to further its interests, if in my power.

Yours faithfully,

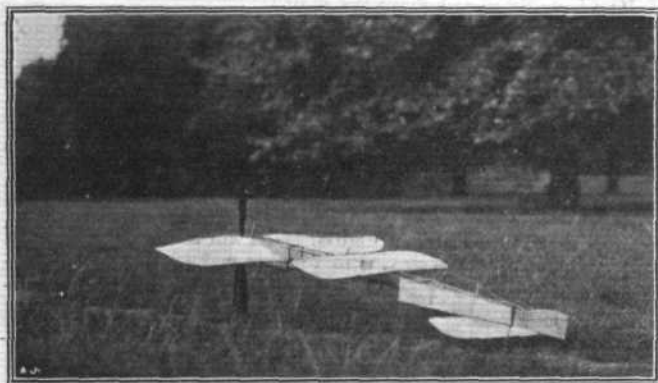
York and London.

SIDNEY H. HOLLANDS.

ANOTHER MONOPLANE.

To the Editor of FLIGHT.

SIR,—I herewith enclose photograph of Mons. Dario H. da Silva’s model monoplane, which has proved very successful as a model. The man-lifting machine now in course of construction has



many ingenious inventions. The wings and propeller were made by the Hyde Park Model Co., and the framework by Messrs. Shripton.

Yours faithfully,

Kensington.

JOSE CIRNÉ.



British Aeroplane Fabric.

FROM Messrs. T. W. K. Clarke and Co. we have received particulars and samples of seven different fabrics for aeroplane work which they are prepared to supply. They are all of British manufacture throughout. Four consist of union cloth treated with celluloid. The one specially recommended is 35 ins. wide, and 36 sq. ft. weigh 1 lb. In addition, Messrs. Clarke supply a light rubbered cotton and similarly treated silk, the latter being chiefly useful for models. The seventh fabric consists of a light but very strong unbleached linen. The following are the particulars of the various cloths:—

Fabric.	Weight.	Width.	Price.
Special ...	36 sq. ft. = 1 lb.	35 ins.	3s. per yard.
No. 1 ...	36 ” = 1 ”	44 ”	2s. ”
” 2 ...	42 ” = 1 ”	44 ”	2s. 6d. ”
” 3 ...	37 ” = 1 ”	44 ”	3s. ”
Rubbered cotton ...		45 ”	5s. 2d. ”
” silk ...		45 ”	8s. 4d. ”
Unbleached linen ...		36 ”	1s. 10d. ”

MR. CLAUDE GRAHAME-WHITE, Managing Director of Messrs. Claude Grahame-White and Co., Ltd., informs us that when at Rheims during the aviation week, he placed orders for Bleriot and Antoinette monoplanes, and also purchased and can give early deliveries of 80-h.p., latest type, extra light, aeroplane engines. He will also take early delivery of two aeroplanes, and will compete for various prizes during the next two months. At the moment he is being taught the art of manipulating aeroplanes near Paris.



PUBLICATIONS RECEIVED.

John Bull, Awake! By James Alexander. London: Unwin Bros., Ltd. Price 1s. net.

Führer durch die Historische Abteilung der Internationalen Luftschiffahrt Ausstellung. 1909. Frankfurt-on-Maine: Wüsten and Co.

The Highway of the Air: an Illustrated Record of Aviation. London and New York: Funk and Wagnalis Co. Price 7s.

Northampton Polytechnic Institute. Announcements for 1909-10 Session. 304 pp. St. John Street, London, E.C.

NEW COMPANY REGISTERED.

Midland Aeroplane Co., Ltd., 274, Corporation Street, Birmingham.—Capital £2,000, in £1 shares.

Aeronautical Patents Published.

Applied for in 1908

Published September 16th, 1909.

21,668. W. F. HOWARD. Aeroplanes.

23,618. S. SCHUTZ. Propeller for flying machines.

BACK NUMBERS OF “FLIGHT.”

SEVERAL back numbers are now becoming **very scarce**, and when exhausted no more complete sets will be procurable.

The publishers have pleasure in announcing that they have secured a few of these back issues of FLIGHT, and any of our new readers who may wish for sets of FLIGHT, No. 1 (January 2nd, 1909), to last week, including No. 31, with Bleriot machine drawings to scale, and Curtiss biplane Number (No. 27), can obtain same post free for 15s. 3d. (abroad 16s. 10d.) from the Publishers, 44, St. Martin’s Lane, W.C. Bleriot Number separately, 2s.

Several numbers are now nearly out of print, except for the publishers’ limited reserve stock for bound volumes at end of year. Those wishing, therefore, to ensure obtaining Volume I complete, with Index and Title Page, can book same now at the price of One Guinea, bound in cloth. Orders will be booked for these in rotation as received. As various numbers become scarce the price will be raised accordingly.

No. 3 is now 1s. 6d.; No. 4, 1s. 6d.; No. 12, 1s. 6d.; No. 15, 1s.; No. 16, 3s. 6d.; No. 31, 2s.

These prices are subject to revision without notice.

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44, ST. MARTIN’S LANE, LONDON, W.C.

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6 ” ” ” ...	3 3	6 ” ” ” ...	5 0
12 ” ” ” ...	6 6	12 ” ” ” ...	10 0

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Should any difficulty be experienced in procuring FLIGHT from local news-vendors, intending readers can obtain each issue direct from the Publishing Office, by forwarding remittance as above.